Remarks

By this Response, no claims have been amended, cancelled, or newly added. Claims 1 and 3-42 remain pending, of which claims 10-42 are withdrawn due to a previous restriction requirement. Reconsideration of the application in light of the following remarks is respectfully requested.

Claims 1-7 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,724,327 to Pope *et al.* ("Pope") in view of U.S. Patent No. 6,437,711 to Nieminen *et al.* ("Nieminen"). Applicants respectfully traverse this rejection.

Applicants respectfully submit that the cited portions of Pope and Nieminen, taken together or individually, do not disclose, teach or render obvious a method of encoding information, comprising, *inter alia*, setting code rates of the one or more codewords such that the last codeword has a lower code rate than the first codeword, such that a similar codeword error probability is achieved for each codeword considering available decoding time for decoding a last codeword will be less than available decoding time for decoding a first codeword, as recited in claim 1.

Even though Pope has been cited as a primary reference in rejecting the claims, the Examiner has applied Nieminen as the primary reference and used Pope to fill the gaps in Nieminen.

The Final Action alleges that Nieminen discloses all the features of claim 1, expect for the features of the recited block code. [Final Action, pages 5 and 6]. Applicants respectfully disagree.

Nieminen is directed to a method of encoding an input data block with a block encoder. In particular, the cited portions of Nieminen disclose determining the length of the input data block before encoding any of its data with the block encoder; dividing the input data block into a plurality of segments wherein all segments are of substantially equal size and no segment is larger than the upper limit; and processing each segment with the block encoder. *See*, Abstract of Nieminen.

In addition to the admitted features that Nieminen fails to disclose, Nieminen fails to disclose, teach or suggest at least the features of setting the recited code rates "such that a ***similar***

codeword error probability is achieved for each codeword considering available ***decoding time for decoding a last codeword will be less than available decoding time for decoding a first codeword***," as recited in claim 1. The Final Action alleges that Nieminen discloses these features in lines 25-30 of column 3. Applicants disagree. Nothing in the cited passage of Nieminen discloses or teaches that the recited code rates are set based upon the recited similar codeword error probability and the recited decoding time for the last codeword.

Pope also fails to fill this gas in Nieminen. Thus, the cited references as a whole fail to teach or suggest the claimed invention.

If the Final Action is alleging that Nieminen inherently discloses the recited code rates feature, then Applicants respectfully submit that this assertion is not supported by facts. "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). *See* MPEP 2112. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is **necessarily** present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' " In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). *See* MPEP 2112, Emphasis added. Further, "[i]n relying upon the theory of inherency, the examiner **must** provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art." (*See* MPEP § 2112 citing Ex Parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)). *See* MPEP 2112, Emphasis added. Here, the Office has not provided ***any*** evidence or technical reasoning whatsoever to support the determination that it is inherent that the cited portions of Nieminen sets code rates based upon the recited similar codeword error probability and the recited decoding time for the last codeword. Applicants submit that there simply is none. Accordingly, Applicants respectfully submit that the reliance on the theory of inherency is improper. Moreover, Applicants respectfully submit that if the Final Action is relying upon inherency, then the Examiner should provide evidence to this effect.

If, on the other hand, the Final Action is alleging that it would be obvious to modify Nieminen to arrive at the claimed invention having the recited code rates features, then Applicants submit that the Final Action has not established the requisite and proper analysis as to how and why one of ordinary skill in the art would combine and/or modify Nieminen and Pope to arrive at the claimed invention.. *See KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007) (a determination, with supporting evidence, must be made as to "whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit"). Instead, the Final Action merely offers the conclusory statement above. This is clearly inadequate under the Supreme Court's *KSR* decision since the Final Action cites nothing which supports such a conclusion.

In fact, persons of ordinary skill in this art would recognize that Nieminen and Pope are not properly combinable for at least the fact that neither Nieminen nor Pope disclose, teach or suggest the recited feature of "setting code rates of the one or more codewords such that the last codeword has a lower code rate than the first codeword, such that a similar codeword error probability is achieved for each codeword considering available decoding time for decoding a last codeword will be less than available decoding time for decoding a first codeword." The Examiner has, at best, used Applicants own disclosure as a roadmap to combine and modify Nieminen and Pope to arrive at the clamed invention. Applicants submit that the Examiner is simply engaging in hindsight reasoning, which has been long held to be improper.

Furthermore, the Final Action has not provided any technical or objective basis to support the determination that Nieminen's method could be modified as alleged in the Final Action. As such, the Final Action's rationale for modifying Nieminen is merely speculative.

Thus, Applicants respectfully submit that neither Nieminen nor Pope, either individually or in combination, disclose, teach or render obvious all of the features recited in claim 1. Therefore, claim 1 should be allowable at least for this reason. Dependent claims 3-7 depend upon base independent claim 1, and should be allowable by reason of their dependency upon an allowable base claim.

Claims 8 and 9 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Pope in view of Nieminen and in further view of U.S. Patent No. 6,757,337 to Zhuang *et al.* ("Zhuang"). Applicants respectfully traverse this rejection.

Claims 8 and 9 depend from claim 1 and are, therefore, patentable for at least the same reasons provided above with respect to claim 1 and for the additional features recited in those claims. As noted above, the cited portions of Nieminen and Pope fail to disclose or render obvious claim 1.

Further, even assuming *arguendo* that the cited portions of Pope, Nieminen and Zhuang are properly combinable (which Applicant does not concede), the cited portions of Zhuang fail to overcome the shortcomings of Pope and Nieminen and/or to independently disclose or render obvious the features of claim 1. The cited portions of Zhuang merely disclose methods of decoding information within communication systems, such as a method for Multiple-Input-Multiple-Output (MIMO) detection and decoding within the communication systems. *See*, Abstract of Zhuang. Moreover, the cited portions of Zhuang fail to at least disclose or render obvious a method of encoding information, comprising, *inter alia*, setting code rates of the one or more codewords such that the last codeword has a lower code rate than the first codeword, such that a similar codeword error probability is achieved for each codeword considering available decoding time for decoding a last codeword will be less than available decoding time for decoding a first codeword, as recited in claim 1.

As a result, Applicant requests that the rejection of claim 8 and 9 under 35 U.S.C. §103(a) in view of Pope, Nieminen and Zhuang be withdrawn and the claims be allowed.

In view of the above amendment, applicant believes the pending application is in condition for allowance. The Director is authorized to charge any fees necessary and/or credit any overpayments to Deposit Account No. 03-3975, referencing Docket No. 043395-0378347.

Respectfully submitted,

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